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10/534,019

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EXAMINER

MAKI, STEVEN D

ART UNIT

PAPER NUMBER

1733

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/534,019

**Applicant(s)**

MIYASAKA, ATSUSHI

**Examiner**

Steven D. Maki

**Art Unit**

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

- 1) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 2) Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the claimed location and orientation of the narrow grooves are ambiguous. Claim 1 recites "narrow grooves are respectively provided at one side in the tire circumferential direction of each of the chamfer portions" (emphasis added). It is uncertain if this language requires (a) the sipes to be circumferentially extending or (b) the sipes to be circumferentially spaced apart. In other words, it is unclear if claim 1 requires circumferential narrow grooves at a circumferentially extending side of the chamfer portion or circumferentially spaced apart lateral narrow grooves at the laterally extending sides of the chamfer portion. The latter interpretation appears to be the literal meaning of the above noted language whereas the former interpretation appears to be the intended meaning. With respect to the intended meaning, it is noted that applicant refers to figure 2A and figure 2B for support of the language added to claim 1. See page 20 of response filed 6-11-07. Also, note that figure 2B illustrates the cross section for line 2B - 2B which cross the circumferentially extending side of the chamfer. Further note the use in claim 1 of "in the tire circumferential direction" with the description of the lateral grooves on lines 5-7 of claim 1.

In claim 11 lines 4-5, there is no antecedent basis for "the second land portion row lateral groove" (emphasis added). In claim 11, the following change is suggested:

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after "each of the bilateral land portion rows," insert --a plurality of lateral grooves extending along the tire axial direction is formed in the second land portion rows, in the tire circumferential direction--.

3) The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4) Claims 1-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 1, the subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention (i.e. the new matter) is the subject matter of "narrow grooves are respectively provided at one side in the tire circumferential direction of each of the chamfer portions" (emphasis added).

The original disclosure fails to reasonably convey this subject matter. Sipe 30 (narrow groove 30) extends from terminal end 20E, crosses the center plane CL and connects to the terminal edge of sipe 28. Sipes 30 fail to completely cross the center land portion such that the sipes 30 (narrow grooves 30) are "provided at one side in the tire circumferential direction of each of the chamfer portions [24]". Furthermore, the original disclosure describes circumferential sipe 28 as extending from terminal edge 20E to

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chamfer portion 24 instead of extending continuously around the tire so as to be "provided at one side in the tire circumferential direction of each of the chamfer portions [24]". In other words, **none of the sides of chamfer 24 is defined a sipe**. Sipes are usually drawn as single lines. However, not all single lines are sipes.

Applicant comments that the amendment to claim 1 is supported at least by original Figs. 2A and 2B. Examiner disagrees. Figures 2A and 2B fail to illustrate sipes "...respectively provided at one side in the tire circumferential direction of each of the chamfer portions". It is emphasized that no sipe is illustrated in figure 2B.

5) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Colombo et al

**7) Claims 1 and 4-6 are rejected under 35 U.S.C. 102(a),(e) as being anticipated by Colombo et al (WO 2003/013881).**

The claimed tire is anticipated by Colombo et al's tire. The claimed chamfer portions read on the notches. With respect to "depth gradually increasing", Colombo et al teaches that a curved surface may be used instead of a flat one for the notches.

With respect to "narrow grooves are respectively provided at one side in the tire circumferential direction of each of the chamfer portions", note (1) the 112 first and second paragraph rejections and (2) Colombo et al's express teaching to provide sipes in the blocks at page 21 lines 17-27.

Japan 109

**8) Claims 1, 4-9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 109 (JP 2002-293109) in view of Poque et al (US 5,964,267) or Japan 903 (JP 02-095903).**

Japan 109, directed to suppressing uneven wear and reducing resonance sound discloses a pneumatic tire with a tread comprising central block rows and shoulder block rows. Projecting parts 18 are formed on the walls of the blocks facing the circumferential grooves. The upper surface of the projecting part 18 extends from the tread surface and is inclined at angle  $\theta_2$ . Since the projecting part 18 is part of the block, the height of the block varies in the circumferential direction. The "chamfer depth" c is 10-50% of the groove depth b. Figures 2 and 3 show the relative size between the width of the "chamfer portion" (projecting part 18), the width of the block

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and the width of the circumferential groove. Figure 3 shows the chamfer portion 18 and the "non chamfer portion" being connected at substantially the same position at the bottom of the circumferential groove. The claimed bilateral land portion rows read on the shoulder rows of blocks and the claimed central land portion reads on one of the remaining rows of blocks. The claimed chamfer portions read on the projecting parts 18. In claim 1, "surfaces of both sides in a tire width direction of the central land portion row are made uneven in the tire circumferential direction" reads on surfaces of both sides in a tire width direction of a central land portion row being "made uneven" by projecting parts 18 as disclosed by Japan 109. Japan 109 does not recite forming sipes (narrow grooves) in the blocks.

As to claims 1 and 4-9, it would have been obvious to form sipes (narrow grooves) in Japan 109's blocks of the "central land portion row" such that the sipes "... are respectively provided at one side in the tire circumferential direction of each of the chamfer portions" in view of (1) it is taken as well known / conventional per se in the tire tread art to form sipes in blocks to improve traction / braking performance (e.g. anti-skid performance) and (2) (a) Poque et al's suggestion to use circumferentially spaced sipes (26, 27) in blocks, which like those of Japan 109 demonstrate projecting parts when the tread is viewed in plan view or (b) Japan 903's suggestion to arrange circumferentially extending sipes in blocks of a tire tread to reduce side skidding on ice and snow. One of ordinary skill in the art would readily understand that the sipes in Poque et al's blocks improve traction / braking performance (e.g. anti-skid performance).

As to claim 13, the sipes of the secondary art (Poque et al or Japan 903) form sub-blocks as claimed.

**9) Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 109 in view of Poque et al or Japan 903 as applied above and further in view of Japan 006 (JP 2-114006).**

As to claims 10-12, it would have been obvious to one of ordinary skill in the art to provide the lateral grooves of Japan 109's block pattern tire tread with wide and narrow portions and a planar chamfer since Japan 006 suggests generating sufficient lateral force and improving wet performance by forming a thin rib in the lateral grooves wherein this rib may form a planar chamfer portion as shown in figure 17. With respect to claim 11, it would have been obvious to use five block rows instead of four block rows in Japan 109's tire tread since it is taken as well known / conventional per se in the tire tread art to use either four or five block rows in a block pattern tire tread. With respect to claim 12, the optimum height and width of the planar chamfer in the lateral groove would have been obvious in view of Japan 006's teaching to obtain the result of generating sufficient lateral force and improving wet performance by forming a thin rib in the lateral grooves wherein this rib may form a planar chamfer portion as shown in figure 17.

**10) Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 109 in view of Poque et al or Japan 903 as applied above and further in view of Europe 457 (EP 890457).**



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As to claims 14-15, it would have been obvious to one of ordinary skill in the art to form sipes ("second narrow grooves") having bent portions in Japan 109's shoulder blocks (bilateral blocks) since (1) Europe 457 suggests forming sipes having bent portions in blocks to improve wet grip performance and braking performance on ice and optionally (2) it is taken as well known / conventional per se in the tire tread art to provide one row of blocks with laterally extending sipes and another row of blocks with circumferentially extending sipes.

Japan 315

**11) Claims 1 and 3-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 315 (JP 11-91315) in view of Japan 109.**

Japan 315 is applied because it teaches the subject matter of dependent claim 3.

Japan 315 discloses a pneumatic tire with a tread comprising a central land row and a shoulder land rows. The central land row comprises central crossing grooves 3. A pair of these grooves 3 is shown as being connected to by a single line. One of ordinary skill in the art would readily understand that this line is a sipe (narrow groove) since sipes are usually drawn in the tread art as being lines since they are so narrow. Hence, Japan 315 is considered to teach the subject matter of claim 3. Japan 315 does not recite chamfer portions as in claim 1. However, it would have been obvious to one of ordinary skill in the art to provide Japan 315's central land row with "chamfer portions" as claimed in view of Japan 109's suggestion to suppress uneven wear and reduce resonance sound by forming projecting parts 18 are formed on the walls of blocks facing circumferential grooves. Furthermore, it would have been obvious to form sipes (narrow

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grooves) in Japan 315's blocks of the "central land portion row" such that the sipes "... are respectively provided at one side in the tire circumferential direction of each of the chamfer portions" in view of (1) Japan 315's teaching to form sipes in the central blocks, (2) Japan 315's teaching to form short one end opening circumferential sipes in shoulder blocks such that on each side of the block, the short one end opening circumferential sipe opens to a lateral groove (figure 1) and optionally (3) it is taken as well known / conventional per se in the tread art to form one end opening circumferentially extend sipes in a central blocks of the tire tread.

#### **Allowable Subject Matter**

**12) Claim 2 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.**

The prior art fails to suggest the specific location and chamfer portion structure as in claim 2 in combination with the subject matter of claim 1. It is emphasized that Japan 109's projecting part 18 is not at an obtuse corner and Japan 320 (JP 11-334320) fails to teach the base of a substantially trapezoidally shaped chamfer portion being substantially parallel to the circumferential direction.

#### **Remarks**

**13) Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.**

Applicant's arguments filed 6-11-07 have been fully considered but they are not persuasive.

Applicant argues that excellent wet draining performance is achieved together with land portion rigidity and steering stability. This argument is not persuasive since the claimed invention has not been compared with either Columbo et al or Japan 109.

Applicant argues that the projecting part 18 of Japan 109 is not formed within the land portion 16, but rather outside of the land portion 16. Applicant comments that the chamfer portion (24) of the present invention is formed within the central land portion (18). This argument is not persuasive since Japan 109's projecting part 18 is part of the block. The same is true in applicant's "projecting part" embodiment shown in figures 7 and 8 and claimed in dependent claims 7-9. The protruding part in figure 3A of Japan 109 is substantially similar to the protruding part in figure 8 of applicant's disclosure.

With respect to applicant's arguments regarding-"narrow grooves are respectively provided at one side in the tire circumferential direction of each of the chamfer portions", note the new ground of rejection.

14) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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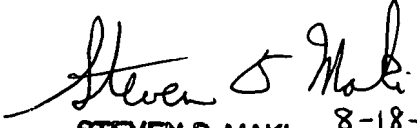
extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Steven D. Maki  
August 18, 2007

  
**STEVEN D. MAKI** 8-18-07  
**PRIMARY EXAMINER**